

Description of a very distinct *Cirsotrema* (Gastropoda: Epitoniidae) from New Caledonia.

Emilio F. GARCIA
115 Oak Crest Dr.
Lafayette, LA 70503
USA

KEYWORDS. Gastropoda, Prosobranchia, Epitoniidae, *Cirsotrema*, taxonomy, New Caledonia.

ABSTRACT. A new gastropod species from New Caledonia assigned to the family Epitoniidae, genus *Cirsotrema*, is described.

INTRODUCTION

A few years ago came into my possession three specimens of a very distinct epitoniid species that had been dredged off New Caledonia. After unsuccessful attempts at identification, and in consultation with well known students of the Epitoniidae, I sent a preliminary description and photographs to Dr. Philippe Bouchet at the Muséum National d'Histoire Naturelle, Paris, France. Dr. Bouchet located, and kindly sent to me for study, specimens of the same taxon collected in deep water in dredging expeditions around New Caledonia from September, 1985 to August, 1994. The new taxon is described herein.

Abbreviations of repository institutions

MNHN- Muséum national d'Histoire naturelle, Paris, France

SBMNH- Santa Barbara Museum of Natural History, Santa Barbara, California, U.S.A.

SYSTEMATICS

Superfamily EPITONIOIDEA

Family EPITONIIDAE S. S. Berry, 1910

Genus *Cirsotrema* Mörch, 1852

Cirsotrema (Cirsotrema) benettorum, n. sp.

Figs 1-5

Description.

Shell turbinate, thick, white; length to 33.2 mm. Protoconch white, smooth, thin, translucent, of two whorls; first whorl minute, second whorl much larger, bulbous, offset from first teleoconch whorl (fig. 5a); teleoconch whorls 11.5 to 12.5, first 4 very small, fragile and easily eroded, next whorls rapidly enlarging (fig. 5b); early whorls convex, later whorls shouldered; suture moderately deep, crossed by axial ribs, some ribs adhering to ribs of earlier whorl.

whorl as wide as it is high, height slightly more than half of length of shell (see Table 1), with a heavy basal cord that fuses with base of lip, creating a wide lobe. Aperture round, peristome continuous, thick, with a slightly free, thinner edge at posterior portion of inner lip. Varices appear from antepenultimate whorl onward; randomly arranged, increasing in thickness and number, from 1 to 6 in the penultimate whorl to 4 to 9 in the last, some varices formed by fusion of last two ribs; thick, slightly reflected, with prominent spine at shoulder. Shell sculpture with narrow, reflected axial ribs between varices, not necessarily aligned from whorl to whorl, on each whorl terminating above the suture, and at basal cord on last whorl; number of ribs variable, 15 to 33 (excluding varices) on penultimate whorl, with shoulder spine where not broken. Intervals between ribs with numerous, poorly defined spiral cords that tend to go up the ribs abaperturally. Operculum black, paucispiral, round.

Type material.

Holotype (MNHN) length 31.4 mm, width 16 mm. Dredged alive off northern New Caledonia, 19°04' S, 163°27' E, in 264-270 m. Paratype A (SBMNH) length 23.3 mm, width 13 mm. Paratype B (MNHN) length 24.7 mm, width 13.5 mm. Paratype C (MNHN) length 24.7 mm, width 13.5 mm. Paratypes A-C were dredged dead off southern New Caledonia in 255-445 m. Paratype D (MNHN) length 4 mm, width 2 mm. Dredged dead at 19° 04' S, 163°27' E, in 260 m. Four other live-collected specimens from the same lot as the holotype are herewith designated as unfigured paratypes (MNHN). Another paratype dredged off southern New Caledonia in 310-325 m is in the author's collection (# 22564).

Type locality.

Off northern New Caledonia, at 19°04'S 163°27'E, dredged in 264-270 m.

Distribution.

Specimens examined were collected between 18°17' S 163°25'E and 23°44'S 168°16'E, at depths from 255 m to 445 m.

Etymology.

Named in honor of Jo and Rusty Bennett, of Fort Myers, Florida, for their four decades of devotion to the study of seashells.

Discussion.

The supraspecific placement of members of the Epitoniidae is not an easy matter (see Bouchet and Warén, 1986: 469-479), and the *Sthenorytis*-like shape and the heavy and numerous varices of the shell of the new species have not made this task any easier. However, the spirally sculptured shell and thick basal cord places it closest to *Cirsotrema*.

Because of the uniqueness of the shell characteristics of the species we have not attempted to compare it with other taxa. *Cirsotrema benettorum* seems to be a rather conservative species in its turbinate shape; however, it is extremely variable in the number of varices and ribs (see Table 1). This characteristic supports DuShane (1974: 4) in her assesment that the limits of specific variation in the number of ribs are greater in those species having more ribs. Extra large ribs begin to develop on sixth teleoconch whorl (Fig.5b). These ribs, because of their width, look like varices when seen laterally; however, they are structurally thin and are not considered herewith as true varices.

The fragility and small size of the first four teleoconch whorls makes them vulnerable to breakage and erosion, and all 26 adult specimens examined have lost them; equally, the spine formation at the shoulder of the ribs are easily eroded.

	HOLOTYPE	PARATYPE A	PARATYPE B	PARATYPE C
Length of shell	31.4 mm	23.3 mm	24.7 mm	24.7 mm
Width of shell(including varices)	16 mm	13.0 mm	13.5 mm	13.5 mm
L/W ratio of shell	1.91	1.79	1.83	1.83 mm
Height of last whorl	16 mm	13.0 mm	13.5 mm	13.5 mm
Width of last whorl	16 mm	13.0 mm	13.5 mm	13.5 mm
H/W ration of last whorl	1.0	1.0	1.0	1.0
Number of varices in penultimate whorl	4	5	4	6
Number of varices in last whorl	9	8	7	7
Number of ribs in penultimate whorl(including varices)	30	19	26	22

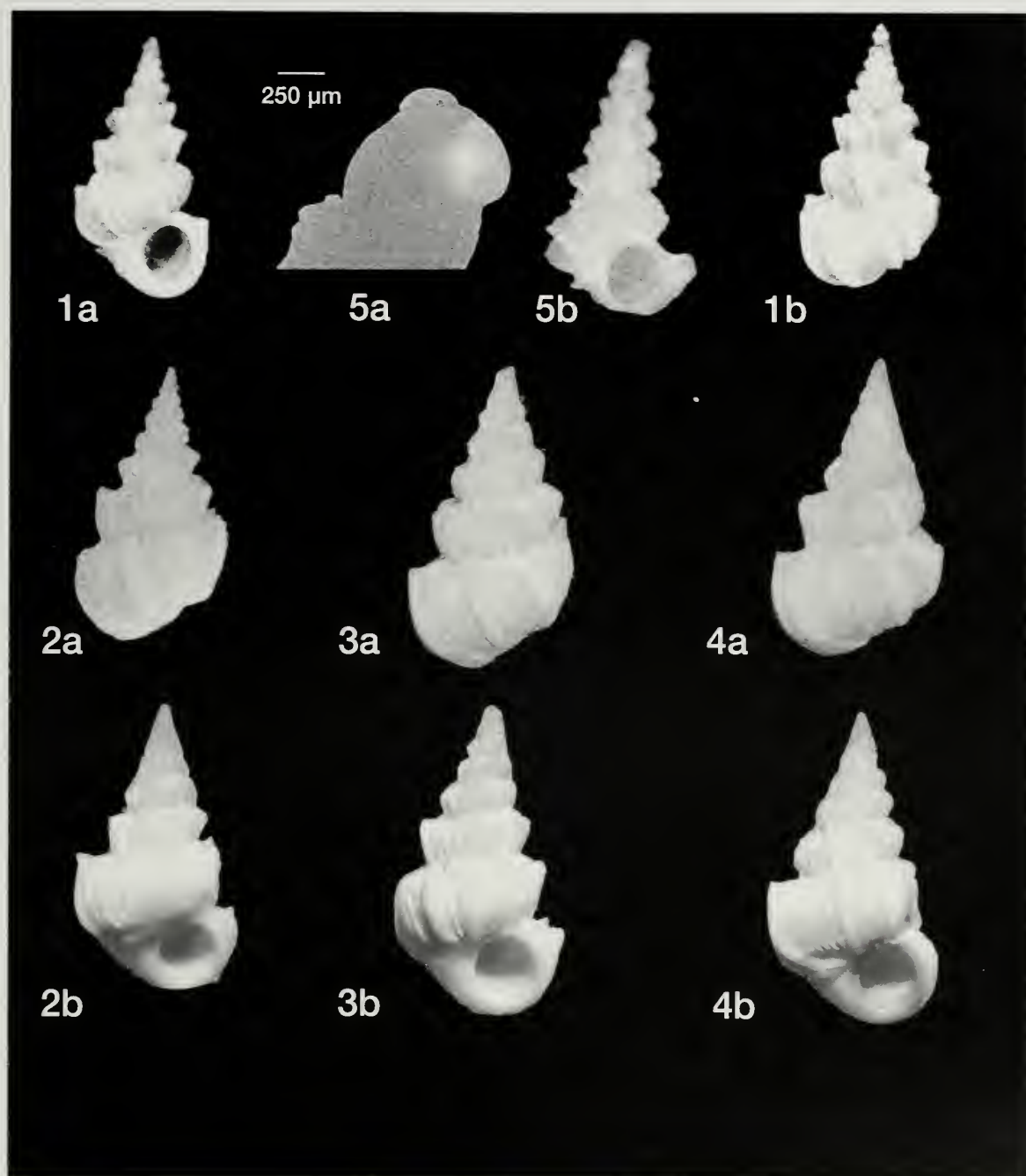
TABLE I : Chart showing relevant dimensions and characteristics of the four figured adult type specimens of *Cirsotrema benettorum*

ACKNOWLEDGEMENTS: My thanks to Mrs. Helen DuShane for her advice and for reading the manuscript, and to Dr. R. N. Kilburn for his comments on the new species. I also would like to thank Mr. Roland Houart, who gave very valuable suggestions, Dr. Philippe Bouchet and the Muséum National d'Histoire Naturelle for the loan of essential material and documentation, and Dr. Suzanne Fredericq, of the University of Louisiana at Lafayette, whose help was essential in the production of the plate.

References.

Bouchet, P., & Warén, A. 1986. Revision of the Northeast Atlantic bathyal and abyssal Aclididae, Eulimidae, Epitoniidae (Mollusca, Gastropoda).- *Boll. Malac.* Supplement 2: 299-576.

DuShane, H. 1974. The Panamic- Galapagan Epitoniidae. *The Veliger* 16 Supplement: 1-84.



Figs. 1-5 *Cirsotrema benettorum* n. sp.

1a-b. Ventral and dorsal views of holotype (Length: 31.4 mm; width: 16 mm). 2a-b. Dorsal and ventral views of paratype A (Length: 23.3 mm; width: 13.0 mm). 3a-b. Dorsal and ventral views of paratype B (Length: 24.7 mm; width: 13.5 mm). 4a-b. Dorsal and ventral views of paratype C (Length: 24.7 mm; width: 13.5 mm).

5a. Protoconch of paratype D. 5b. Paratype D, a juvenile showing protoconch and first six whorls (Length: 4.1 mm; width: 1.9 mm).